#14
3-16-04

Appl. No.	:	09/699,517
Applicant	:	Timothy A. McDonough et al.
Filed	:	October 31, 2000
Title	:	User Notification System with an Illuminated Computer Input Device
TC/A.U.	:	2674
Examiner	:	Abbas I. Abdulselam
Docket No.	:	003797.00007

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

DECLARATION UNDER 37 C.F.R. § 1.131

Sir:

We, TIMOTHY A. McDONOUGH, CARL J. LEDBETTER, ROBERT SCOTT PLANK, STEVEN W. FISHER, STEVEN T. KANEKO, and STEVEN BATHICHE, hereby declare[1] that:

1) We are named as joint inventors of the above-captioned application, U.S. Application Serial No. 09/699,517, and all claims presently pending therein;
2) I, TIMOTHY A. McDONOUGH, am presently employed by Microsoft Corporation (Microsoft) and have been since July 1997. Microsoft is the assignee of the above-identified application.

[1] Each numbered declaration is a joint declaration unless an individual reference has been made. In such a case, the referenced individual is making the numbered declaration.

3) I, CARL J. LEDBETTER, am presently employed by Microsoft Corporation (Microsoft) and have been since January 1995. Microsoft is the assignee of the above-identified application.

4) I, ROBERT SCOTT PLANK, am presently employed by Microsoft Corporation (Microsoft) and have been since January 1992. Microsoft is the assignee of the above-identified application.

5) I, STEVEN W. FISHER, am presently employed by Microsoft Corporation (Microsoft) and have been since September 1997. Microsoft is the assignee of the above-identified application.

6) I, STEVEN T. KANEKO, am presently employed by Microsoft Corporation (Microsoft) and have been since September 1991. Microsoft is the assignee of the above-identified application.

7) I, STEVEN BATHICHE, am presently employed by Microsoft Corporation (Microsoft) and have been since June 1999. Microsoft is the assignee of the above-identified application.

8) We were employed by Microsoft during development of the above-identified invention.

9) We conceived of and reduced to practice the invention recited in at least a number of the claims of the above-captioned application prior to February 20, 2000.

10) Conception occurred prior to February 20, 2000, as is evidenced by the reproduction of a notebook entry in Exhibit A.

11) Actual reduction to practice occurred prior to February 20, 2000, as is evidenced by the source code in Exhibit B.

12) Support for at least claims 1-3, 6-10, 21, 27-28, and 30 of the above-captioned application can be found, among other places, at least within Exhibits A and B prepared prior to February 20, 2000.

13) The attached Exhibits A and B have not been materially altered since it was originally created except for the redaction of references to dates on the documents.

14) Each of us individually represents that we are over 18 years of age and of competent mind.

15) All statements made of our own knowledge are true and all statements made on information and belief are believed to be true; and further, these statements were made with the knowledge that willful, false statement so made are punishable by fine or imprisonment or both, under 18 U.S.C. § 1001 and that such willful, false statements may jeopardize the validity of the above-identified application or any patent issuing thereon.

Respectfully submitted,

Timothy A. McDonough,
Microsoft Corporation

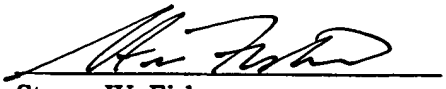
Date

Carl J. Ledbetter
Microsoft Corporation

Date

Robert Scott Plank
Microsoft Corporation

Date



Steven W. Fisher
Microsoft Corporation

02/16/04
Date

Steven T. Kaneko
Microsoft Corporation

Date

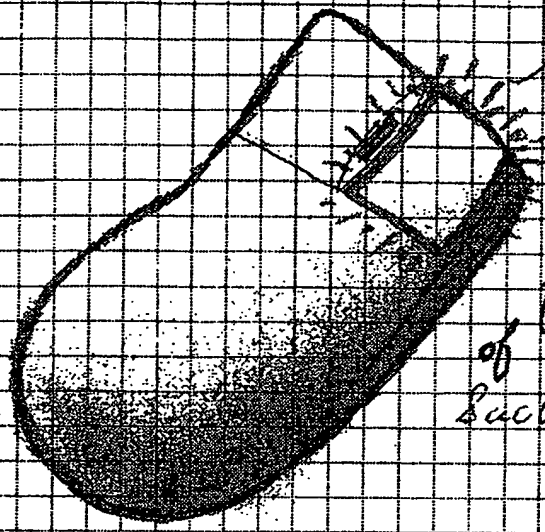
Steven Bathiche,
Microsoft Corporation

Date

EXHIBIT A

Reproduction of Notebook Entry

Microsoft



Light + tactile feedback for Notification of Email and such.

for any situation where the user needs to be made aware of a function for an object the button can light up + give a tactile response to tell the user they use next or you have a new alert.

SUBJECT: Context MENU discoverability PROJECT:

WORK AND RECORD OF: Steve DATE:

WITNESSED AND UNDERSTOOD BY: DATE:

WITNESSED AND UNDERSTOOD BY: DATE:

EXHIBIT B

Source Code

```
VERSION 5.00
Begin VB.Form form1
   Caption         =   "HRD New Mail Notification"
   ClientHeight    =   465
   ClientLeft      =   60
   ClientTop       =   345
   ClientWidth     =   3750
   LinkTopic       =   "form1"
   ScaleHeight     =   465
   ScaleWidth      =   3750
   Visible         =   0   'False
   Begin VB.Timer Timer2
      Interval        =   100
      Left            =   0
      Top             =   0
   End
   Begin VB.Timer Timer1
      Enabled         =   0   'False
      Interval        =   200
      Left            =   480
      Top             =   0
   End
End
Attribute VB_Name = "form1"
Attribute VB_GlobalNameSpace = False
Attribute VB_Creatable = False
Attribute VB_PredeclaredId = True
Attribute VB_Exposed = False
Option Explicit

Private Const KEYEVENTF_EXTENDEDKEY = &H1
Private Const KEYEVENTF_KEYUP = &H2
Private Const VK_SCROLL = &H91
Private Const VK_CAPITAL = &H14
Private Const VK_NUMLOCK = &H90


Private messages As Integer
Private namespace As namespace
Private inbox As MAPIFolder

Private keystate() As Byte
Private result As Long
Private light_state As Boolean


Private WithEvents m_application As outlook.Application
Attribute m_application.VB_VarHelpID = -1

Private hwndMouseDriver As Long
Private light_on As Long
Private light_off As Long
Private Declare Function RegisterWindowMessage Lib "user32" Alias
"RegisterWindowMessageA" (ByVal lpString As String) As Long
Private Declare Function SendMessage Lib "user32" Alias "SendMessageA" (ByVal
hwnd As Long, ByVal wMsg As Long, ByVal wParam As Long, lParam As Any) As Long
```

```
Private Declare Function FindWindow Lib "user32" Alias "FindWindowA" (ByVal
lpClassName As String, ByVal lpWindowName As String) As Long
Private Declare Function PostMessage Lib "user32" Alias "PostMessageA" (ByVal
hwnd As Long, ByVal wMsg As Long, ByVal wParam As Long, ByVal lParam As Long) As
Long


Private Declare Sub keybd_event Lib "user32" (ByVal bVk As Byte, ByVal bScan As
Byte, ByVal dwFlags As Long, ByVal dwExtraInfo As Long)
Private Declare Function GetKeyboardState Lib "user32" (pbKeyState As Byte) As
Long

Private Declare Function GetActiveWindow Lib "user32" () As Long
Private Declare Function GetWindowText Lib "user32" Alias "GetWindowTextA" _
   (ByVal hwnd As Long, ByVal lpString As String, ByVal cch As Long) As Long

Private Declare Function GetFocus Lib "user32" () As Long

'tray icon stuff
'Declare a user-defined variable to pass to the Shell_NotifyIcon
      'function.
      Private Type NOTIFYICONDATA
         cbSize As Long
         hwnd As Long
         uId As Long
         uFlags As Long
         uCallBackMessage As Long
         hIcon As Long
         szTip As String * 64
      End Type

      'Declare the constants for the API function. These constants can be
      'found in the header file Shellapi.h.

      'The following constants are the messages sent to the
      'Shell_NotifyIcon function to add, modify, or delete an icon from the
      'taskbar status area.
      Private Const NIM_ADD = &H0
      Private Const NIM_MODIFY = &H1
      Private Const NIM_DELETE = &H2

      'The following constant is the message sent when a mouse event occurs
      'within the rectangular boundaries of the icon in the taskbar status
      'area.
      Private Const WM_MOUSEMOVE = &H200

      'The following constants are the flags that indicate the valid
      'members of the NOTIFYICONDATA data type.
      Private Const NIF_MESSAGE = &H1
      Private Const NIF_ICON = &H2
      Private Const NIF_TIP = &H4

      'The following constants are used to determine the mouse input on the
      'the icon in the taskbar status area.

      'Left-click constants.
```

```
Private Const WM_LBUTTONDBLCLK = &H203    'Double-click
Private Const WM_LBUTTONDOWN = &H201      'Button down
Private Const WM_LBUTTONUP = &H202        'Button up

'Right-click constants.
Private Const WM_RBUTTONDBLCLK = &H206    'Double-click
Private Const WM_RBUTTONDOWN = &H204      'Button down
Private Const WM_RBUTTONUP = &H205        'Button up

'Declare the API function call.
Private Declare Function Shell_NotifyIcon Lib "shell32" _
   Alias "Shell_NotifyIconA" _
   (ByVal dwMessage As Long, pnid As NOTIFYICONDATA) As Boolean

'Dimension a variable as the user-defined data type.
Dim nid As NOTIFYICONDATA
```

```
'Private Declare Function RegisterWindowMessage Lib "user32" Alias
"RegisterWindowMessageA" (ByVal lpString As String) As Long
'Private Declare Function PostMessage Lib "user32" Alias "PostMessageA" (ByVal
hwnd As Long, ByVal wMsg As Long, ByVal wParam As Long, ByVal lParam As Long) As
Long



Private Sub Command1_Click()

End Sub
Private Sub scroll_light(state As Boolean)

    ReDim keystate(0 To 255)
    result = GetKeyboardState(keystate(0))
    If (result) Then
        If (keystate(VK_SCROLL) And Not (state)) Then
            keybd_event VK_SCROLL, 0, KEYEVENTF_EXTENDEDKEY Or 0, 0
            keybd_event VK_SCROLL, 0, KEYEVENTF_EXTENDEDKEY Or KEYEVENTF_KEYUP,
0
        ElseIf (Not (keystate(VK_SCROLL)) And state) Then
            keybd_event VK_SCROLL, 0, KEYEVENTF_EXTENDEDKEY Or 0, 0
            keybd_event VK_SCROLL, 0, KEYEVENTF_EXTENDEDKEY Or KEYEVENTF_KEYUP,
0
        End If
    End If


End Sub
```

```
Private Sub Form_Initialize()


light_on = RegisterWindowMessage("light_on")
light_off = RegisterWindowMessage("light_off")

hwndMouseDriver = FindWindow("POINTEXE", "Pointer.exe Invisible Window")

result = PostMessage(hwndMouseDriver, light_on, 0, 0)

Set m_application = CreateObject("outlook.application", "")
Set namespace = m_application.GetNamespace("MAPI")
Set inbox = namespace.GetDefaultFolder(olFolderInbox)

'if light on turn it off
'scroll_light (False)

If inbox.UnReadItemCount <> 0 Then
messages = inbox.UnReadItemCount * 2
Timer1.Enabled = True
End If

End Sub

Private Sub Form_KeyPress(KeyAscii As Integer)
    scroll_light (False)
    Timer1.Enabled = False
    Timer2.Enabled = False

End Sub


Private Sub Form_Load()
'tray icon stuff

        'Set the individual values of the NOTIFYICONDATA data type.
         nid.cbSize = Len(nid)
         nid.hwnd = form1.hwnd
         nid.uId = vbNull
         nid.uFlags = NIF_ICON Or NIF_TIP Or NIF_MESSAGE
         nid.uCallBackMessage = WM_MOUSEMOVE
         nid.hIcon = form1.Icon
         nid.szTip = "Double Click to close Mouse Light" & vbNullChar

         'Call the Shell_NotifyIcon function to add the icon to the taskbar
         'status area.
         Shell_NotifyIcon NIM_ADD, nid

'tray icon end

End Sub

Private Sub Form_MouseMove(Button As Integer, Shift As Integer, X As Single, Y
As Single)

          Dim temp As Integer
```

```
      ' Return value that Windows has written to string.
      ActiveWindowCaption = strCaption
   End If
 End Function '

Private Sub Timer1_Timer()


If messages <> 0 And (messages Mod 2 = 0) Then
    result = PostMessage(hwndMouseDriver, light_on, 0, 0)
    'scroll_light (True)
    messages = messages - 1
ElseIf messages <> 0 And Not (messages Mod 2 = 0) Then
    result = PostMessage(hwndMouseDriver, light_off, 0, 0)
   ' scroll_light (False)
    messages = messages - 1
ElseIf inbox.UnReadItemCount <> 0 Then
    result = PostMessage(hwndMouseDriver, light_off, 0, 0)
   ' scroll_light (False)
    Timer1.Enabled = False
    Timer2.Enabled = True
Else
    result = PostMessage(hwndMouseDriver, light_on, 0, 0)
   ' scroll_light (False)
    Timer2.Enabled = False
    Timer1.Enabled = False
End If

End Sub




Private Sub Timer2_Timer()
    messages = inbox.UnReadItemCount * 2
    Timer2.Enabled = False
    Timer1.Enabled = True

End Sub
```

```
            'Event occurs when the mouse pointer is within the rectangular
            'boundaries of the icon in the taskbar status area.
            Dim msg As Long
            Dim sFilter As String
            msg = X / Screen.TwipsPerPixelX
            Select Case msg
               Case WM_LBUTTONDOWN
               Case WM_LBUTTONUP
               Case WM_LBUTTONDBLCLK
                Unload form1
               Case WM_RBUTTONDOWN
               Case WM_RBUTTONUP
               Case WM_RBUTTONDBLCLK
            End Select
End Sub

Private Sub Form_Terminate()
         'Delete the added icon from the taskbar status area when the
          'program ends.
          Shell_NotifyIcon NIM_DELETE, nid
    result = PostMessage(hwndMouseDriver, light_on, 0, 0)
End Sub

Private Sub Form_Unload(Cancel As Integer)
         'Delete the added icon from the taskbar status area when the
          'program ends.
          Shell_NotifyIcon NIM_DELETE, nid
             result = PostMessage(hwndMouseDriver, light_on, 0, 0)

End Sub


Private Sub m_application_NewMail()

Timer1.Enabled = False
messages = inbox.UnReadItemCount * 2
result = PostMessage(hwndMouseDriver, light_off, 0, 0)
'scroll_light (False)
Timer1.Enabled = True

End Sub


 Function ActiveWindowCaption() As String

   Dim strCaption As String
   Dim lngLen   As Long

   ' Create string filled with null characters.
   strCaption = String$(255, vbNullChar)
   ' Return length of string.
   lngLen = Len(strCaption)

   ' Call GetActiveWindow to return handle to active window,
   ' and pass handle to GetWindowText, along with string and its length.
   If (GetWindowText(GetFocus, strCaption, lngLen) > 0) Then
```